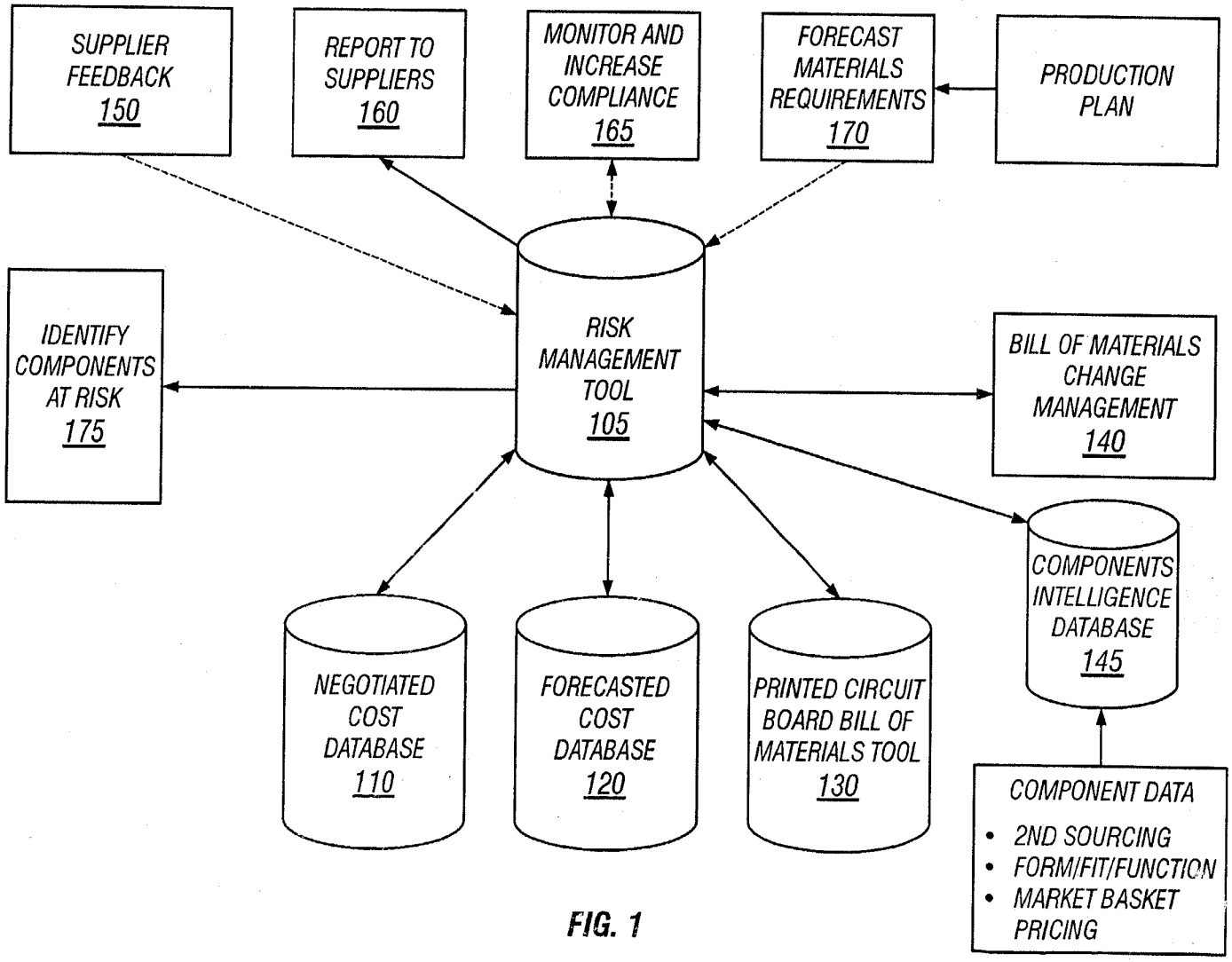
SUPPLIER FEEDBACK 150
REPORT TO SUPPLIERS 160
MONITOR AND INCREASE COMPLIANCE 165
FORECAST MATERIALS REQUIREMENTS 170
PRODUCTION PLAN
IDENTIFY COMPONENTS AT RISK 175
RISK MANAGEMENT TOOL 105
BILL OF MATERIALS CHANGE MANAGEMENT 140
COMPONENTS INTELLIGENCE DATABASE 145
NEGOTIATED COST DATABASE 110
FORECASTED COST DATABASE 120
PRINTED CIRCUIT BOARD BILL OF MATERIALS TOOL 130
COMPONENT DATA
• 2ND SOURCING
• FORM/FIT/FUNCTION
• MARKET BASKET PRICING

FIG. 1

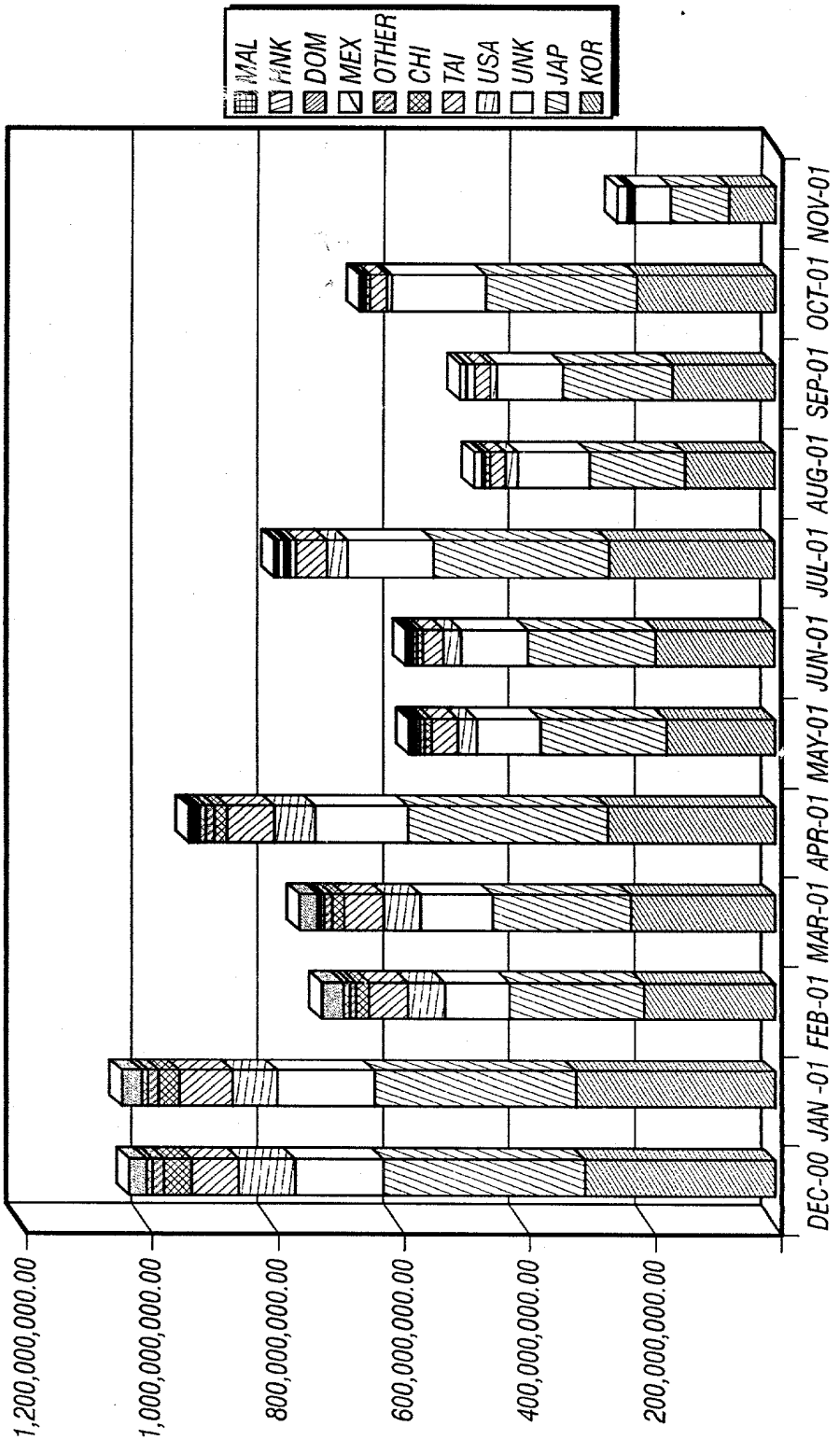
MAL
INK
DOM
MEX
OTHER
CHI
TAI
USA
UNK
JAP
KOR
1,200,000,000.00
1,000,000,000.00
800,000,000.00
600,000,000.00
400,000,000.00
200,000,000.00
DEC-00 JAN -01 FEB-01 MAR-01 APR-01 MAY-01 JUN-01 JUL-01 AUG-01 SEP-01 OCT-01 NOV-01

FIG. 2

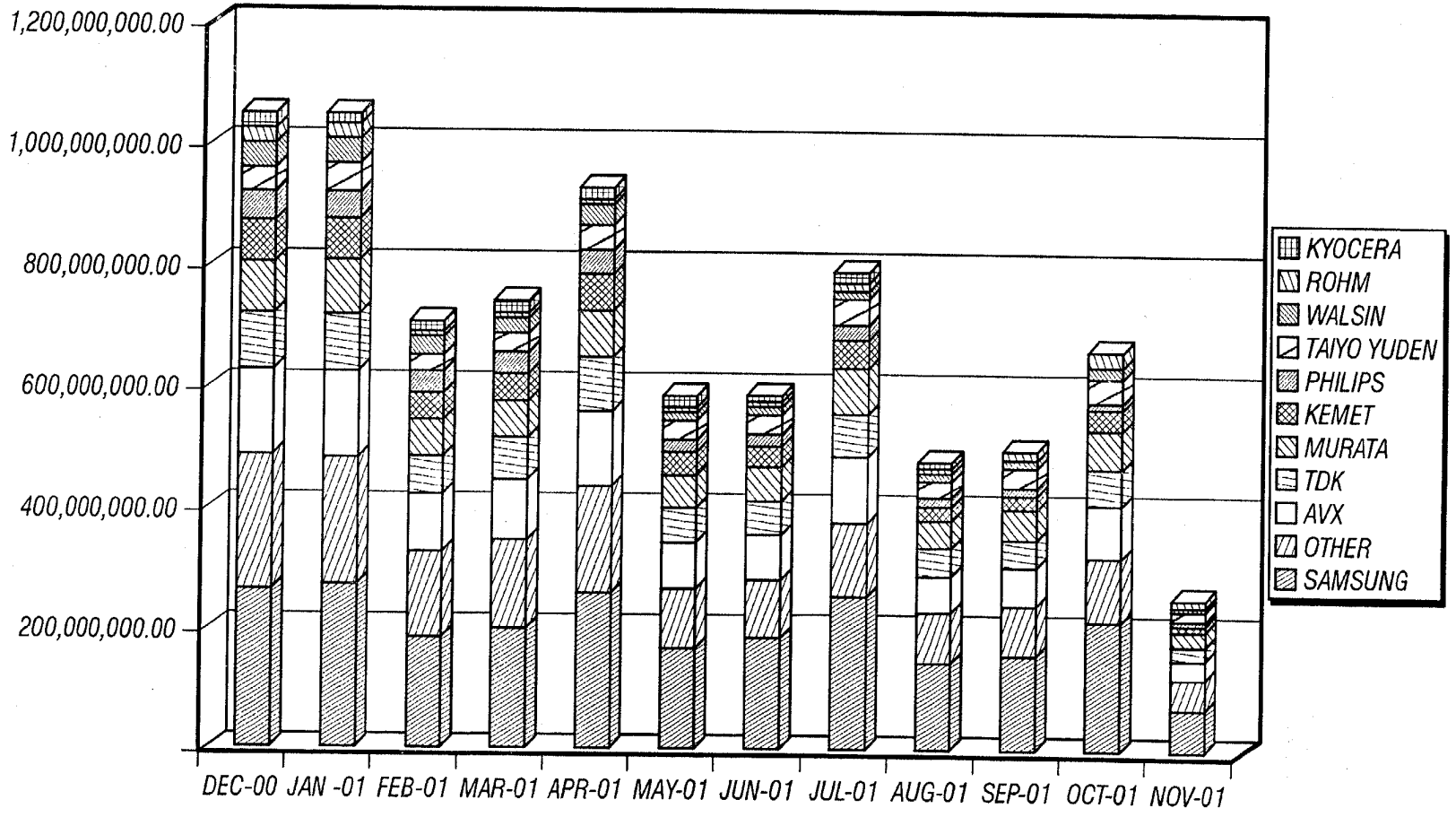
1,200,000,000.00
1,000,000,000.00
800,000,000.00
600,000,000.00
400,000,000.00
200,000,000.00
DEC-00
JAN -01
FEB-01
MAR-01
APR-01
MAY-01
JUN-01
JUL-01
AUG-01
SEP-01
OCT-01
NOV-01
KYOCERA
ROHM
WALSIN
TAIYO YUDEN
PHILIPS
KEMET
MURATA
TDK
AVX
OTHER
SAMSUNG

FIG. 3

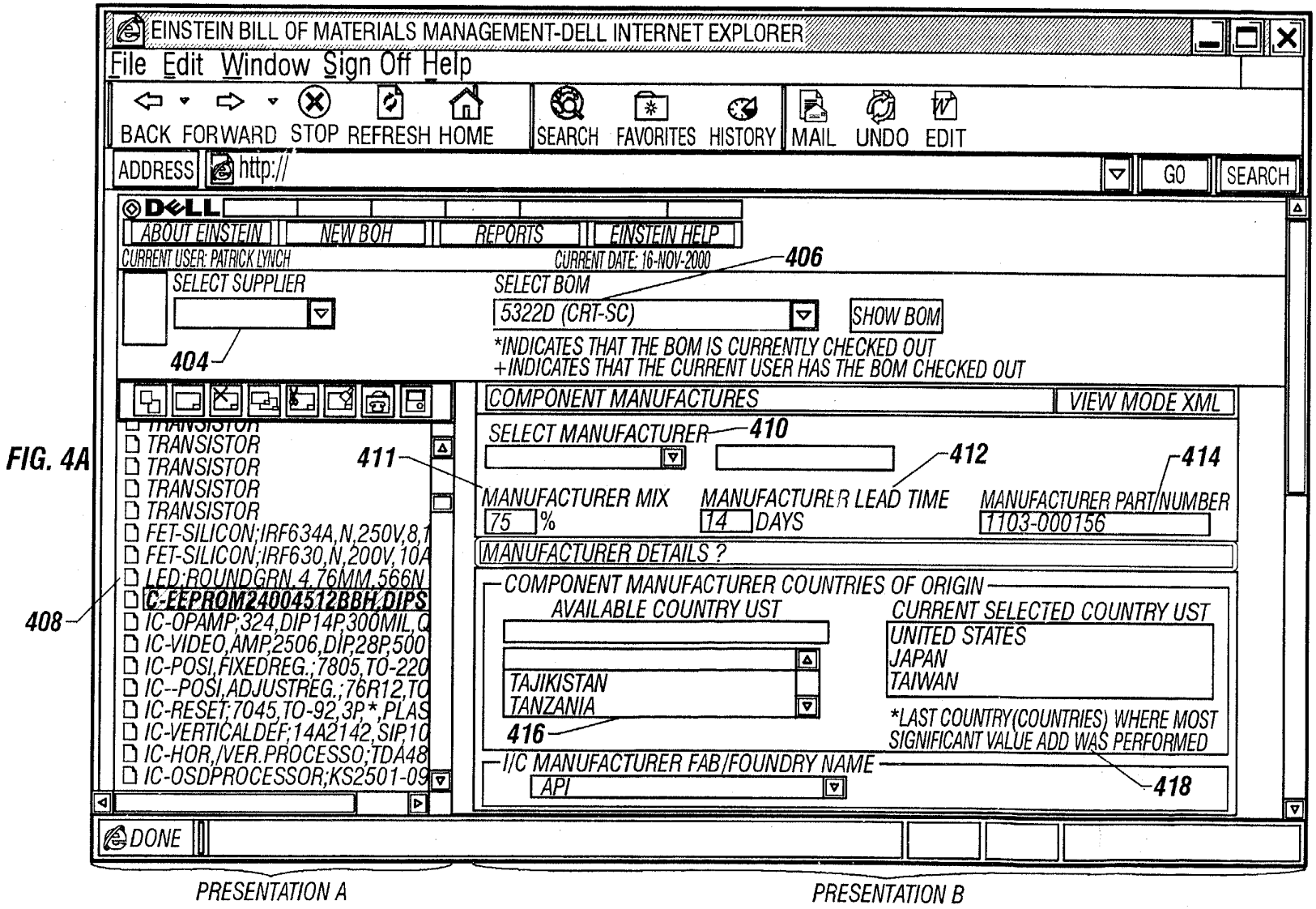
EINSTEIN BILL OF MATERIALS MANAGEMENT-DELL INTERNET EXPLORER
File Edit Window Sign Off Help
BACK FORWARD STOP REFRESH HOME
SEARCH FAVORITES HISTORY
MAIL UNDO EDIT
ADDRESS http://
GO
SEARCH
DELL
ABOUT EINSTEIN
NEW BOM
REPORTS
EINSTEIN HELP
CURRENT USER: PATRICK LYNCH
CURRENT DATE: 16-NOV-2000
406
SELECT SUPPLIER
SELECT BOM
5322D (CRT-SC)
SHOW BOM
404
*INDICATES THAT THE BOM IS CURRENTLY CHECKED OUT
+INDICATES THAT THE CURRENT USER HAS THE BOM CHECKED OUT
COMPONENT MANUFACTURES
VIEW MODE XML
SELECT MANUFACTURER
410
411
412
414
MANUFACTURER MIX
75 %
MANUFACTURER LEAD TIME
14 DAYS
MANUFACTURER PART NUMBER
1103-000156
MANUFACTURER DETAILS ?
TRANSISTOR
TRANSISTOR
TRANSISTOR
TRANSISTOR
FET-SILICON;IRF634A,N,250V,8,1
FET-SILICON;IRF630,N,200V,10A
LED;ROUNDGRN,4.76MM,566N
C-EEPROM24004512BBH,DIPS
IC-OPAMP;324,DIP14P,300MIL,Q
IC-VIDEO,AMP,2506,DIP,28P,500
IC-POSI,FIXEDREG.;7805,TO-220
IC--POSI,ADJUSTREG.;76R12,TO
IC-RESET;7045,TO-92,3P,*,PLAS
IC-VERTICALDEF;14A2142,SIP,10
IC-HOR,/VER.PROCESSO;TDA48
IC-OSDPROCESSOR;KS2501-09
408
COMPONENT MANUFACTURER COUNTRIES OF ORIGIN
AVAILABLE COUNTRY UST
CURRENT SELECTED COUNTRY UST
TAJIKISTAN
TANZANIA
UNITED STATES
JAPAN
TAIWAN
416
*LAST COUNTRY(COUNTRIES) WHERE MOST SIGNIFICANT VALUE ADD WAS PERFORMED
I/C MANUFACTURER FAB/FOUNDRY NAME
API
418
DONE
PRESENTATION A
PRESENTATION B

FIG. 4A

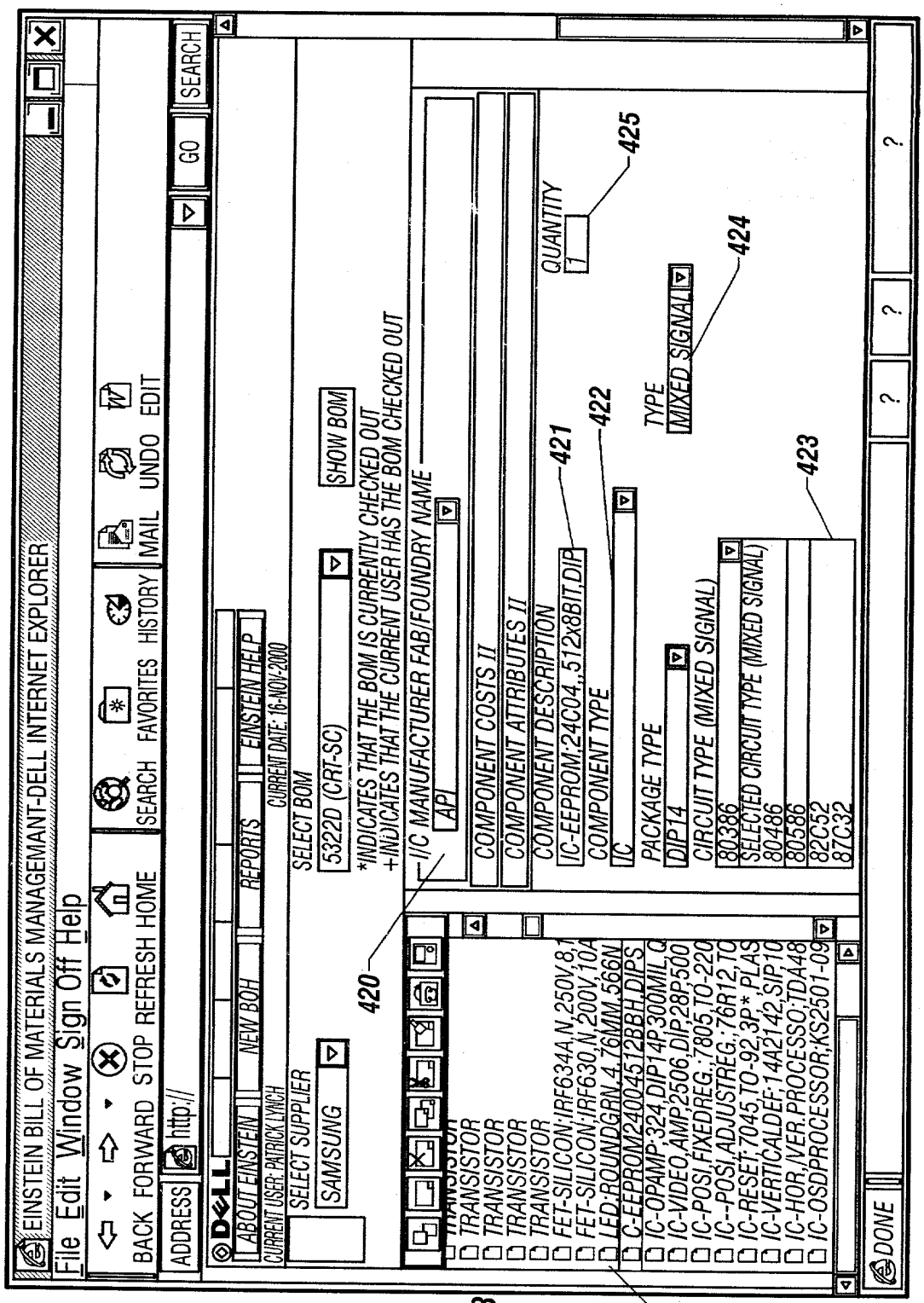
EINSTEIN BILL OF MATERIALS MANAGEMANT-DELL INTERNET EXPLORER
File Edit Window Sign Off Help
BACK FORWARD STOP REFRESH HOME SEARCH FAVORITES HISTORY MAIL UNDO EDIT
ADDRESS http://
GO
SEARCH
DELL
ABOUT EINSTEIN
NEW BOM
REPORTS
EINSTEIN HELP
CURRENT USER: PATRICK LYNCH
CURRENT DATE: 16-NOV-2000
SELECT BOM
SELECT SUPPLIER
SAMSUNG
5322D (CRT-SC)
SHOW BOM
*INDICATES THAT THE BOM IS CURRENTLY CHECKED OUT
+INDICATES THAT THE CURRENT USER HAS THE BOM CHECKED OUT
I/C MANUFACTURER FAB/FOUNDRY NAME
API
COMPONENT COSTS II
COMPONENT ATTRIBUTES II
COMPONENT DESCRIPTION
IC-EEPROM;24C04,,512x8BIT,DIP
COMPONENT TYPE
IC
PACKAGE TYPE
DIP14
CIRCUIT TYPE (MIXED SIGNAL)
80386
SELECTED CIRCUIT TYPE (MIXED SIGNAL)
80486
80586
82C52
87C32
QUANTITY
1
TYPE
MIXED SIGNAL
TRANSISTOR
TRANSISTOR
TRANSISTOR
TRANSISTOR
FET-SILICON;IRF634A,N,250V,8,1
FET-SILICON;IRF630,N,200V,10A
LED;ROUNDGRN,4.76MM,566N
C-EEPROM2400451 2BBH,DIP8
IC-OPAMP;324,DIP14P300MIL,Q
IC-VIDEO,AMP;2506,DIP28P500
IC-POSI,FIXEDREG.;7805,TO-220
IC--POSI,ADJUSTREG.;76R12,TO
IC-RESET;7045,TO-92,3P,*,PLAS
IC-VERTICALDEF;14A2142,SIP10
IC-HOR,/VER.PROCESSO;TDA48
IC-OSDPROCESSOR;KS2501-09
DONE
420
421
422
423
424
425
408

FIG. 4B

SELECT MONTH: MAY-OCT 510

COST	MAY	JUN	JUL	AUG	SEP	OCT
MATERIAL COST CALCULATED	0	0	0	0	0	0
MATERIAL COST						
LABOR COST						
OVERHEAD						
PROFIT						
FREIGHT	0	0	0	0	0	0
FREIGHT CALCULATED	0	0	0	0	0	0
FREIGHT COST						
INSURANCE						
FUEL SURCHARGE/CREDIT						
AIR (EXCEPTIONS)						
⊟ SLC	0	0	0	0	0	0
SLC CALCULATED	0	0	0	0	0	0
STORAGE						
PALLET IN						
PALLET OUT						
PALLET CONFIGURATION						
2 WEEK BUFFER FINANCE						
WARRANTY						
SUPPLIER ABSORPTION						
⊟ MISCELLANEOUS	0	0	0	0	0	0
MISCELLANEOUS CALCULATED	0	0	0	0	0	0
CORNER BOARD						
SLIP SHEETS						
PALLET PURCHASE						
PROCESSING FEE/HANDLING CHARGE						
BROKERAGE						
DECONTAINERIZATION						
NET TERMS						
REGIONAL PRODUCT ADDER						
HARBOR MAINTENANCE						

FIG. 5A

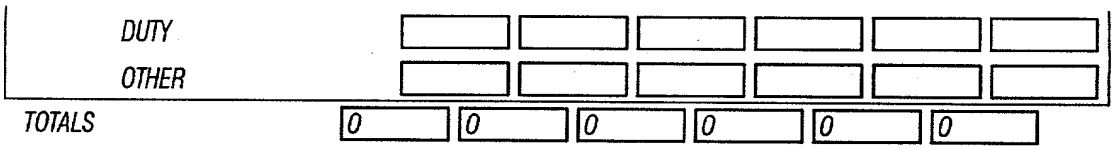

FIG. 5B

SELECTED MONTH: NOV-APR

COST	NOV	DEC	JAN	FEB	MAR	APR
MATERIAL COST CALCULATED	0	0	0	0	0	0
MATERIAL COST						
LABOR COST						
OVERHEAD						
PROFIT						
MISCELLANEOUS						
TOTALS	0	0	0	0	0	0

FIG. 6

SELECTED MONTH: NOV-APR

COST	NOV	DEC	JAN	FEB	MAR	APR
MATERIAL COST						

FIG. 7

SUBSTITUTE SHEET (RULE 26)

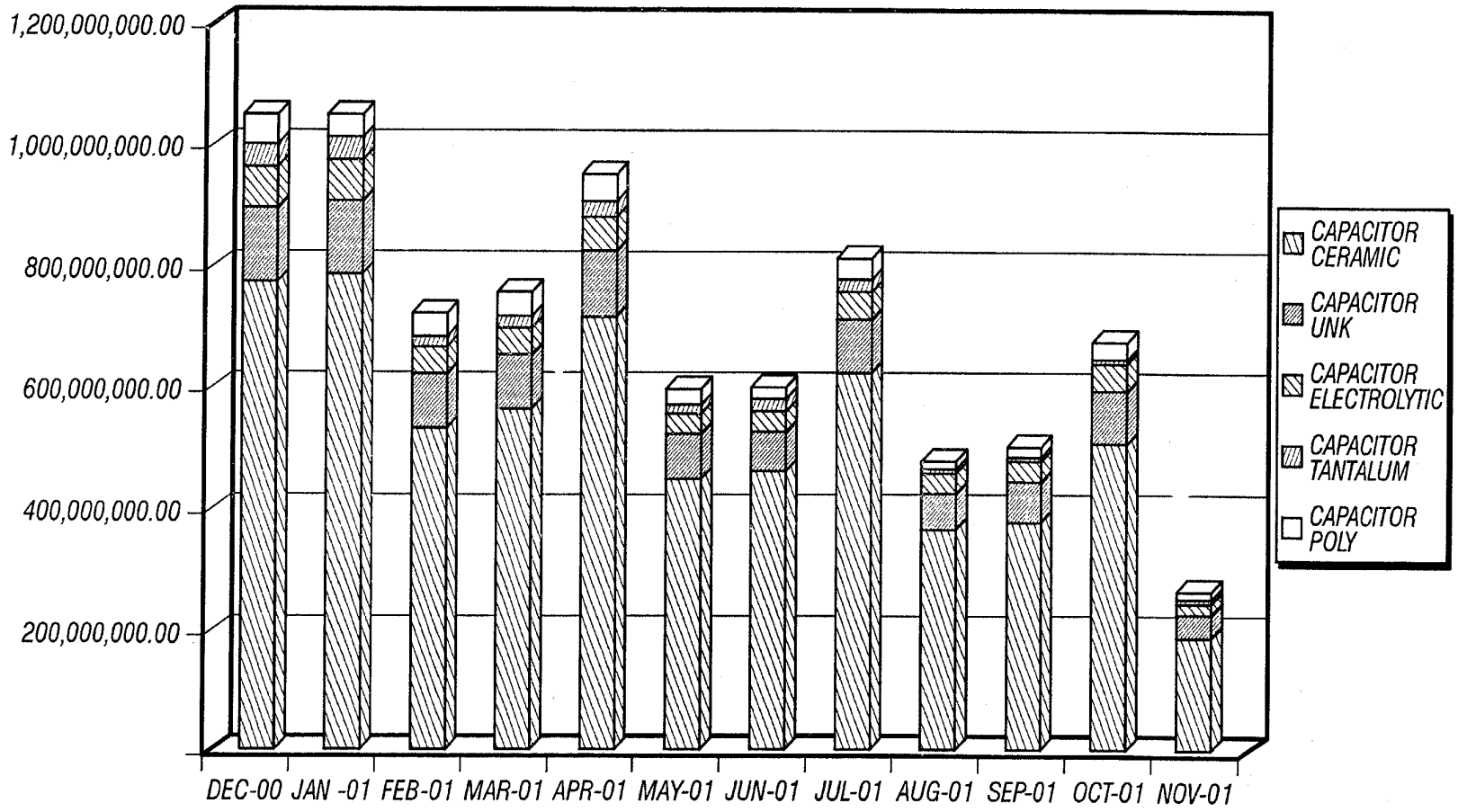

FIG. 8A

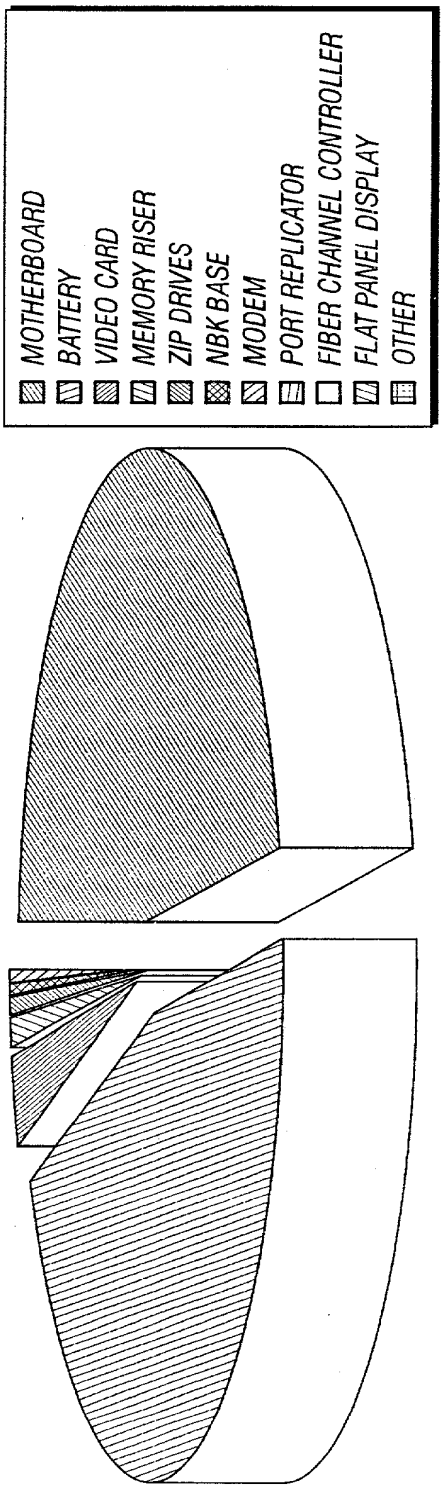
MOTHERBOARD
BATTERY
VIDEO CARD
MEMORY RISER
ZIP DRIVES
NBK BASE
MODEM
PORT REPLICATOR
FIBER CHANNEL CONTROLLER
FLAT PANEL DISPLAY
OTHER

FIG. 8B

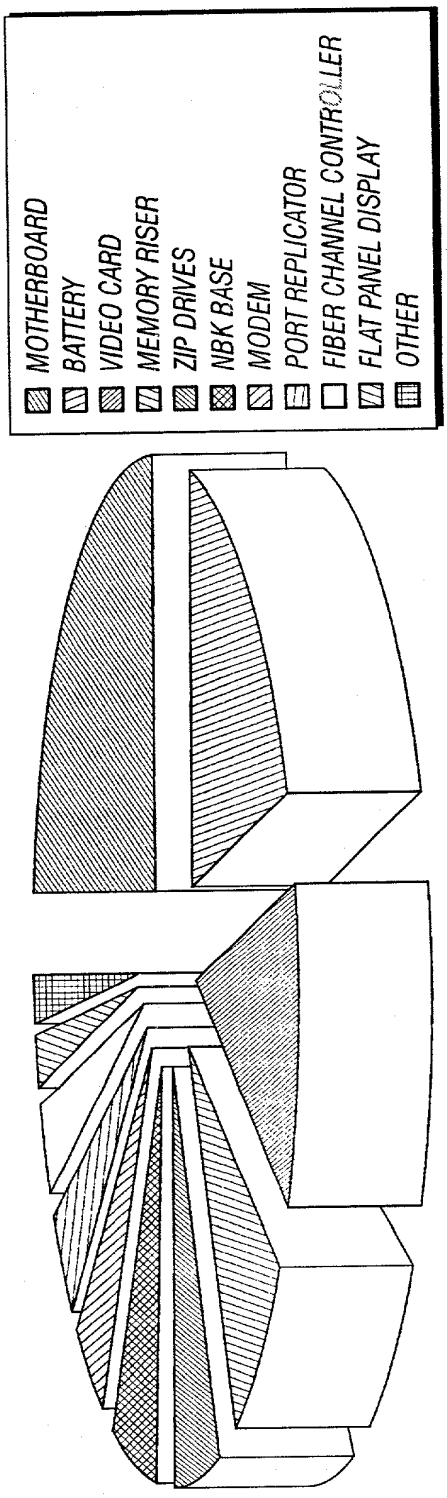
MOTHERBOARD
BATTERY
VIDEO CARD
MEMORY RISER
ZIP DRIVES
NBK BASE
MODEM
PORT REPLICATOR
FIBER CHANNEL CONTROLLER
FLAT PANEL DISPLAY
OTHER

FIG. 8C

Patent Pending

Geo-Political Risk:

Concentration Risk	Political/Economic Risk

Rating Methodology:

Percent of Supply in a Single Country:

- *~33% -- Low*
- *~50% -- Moderate*
- *~75%+ -- High*

Every country is rated on trade risk, medium-term lending risk, political and policy risk. Weighted risk ratings reflect lowest risk (1) to highest risk (5)

Modem Example:

Country	% of Supply Base	Weighted Risk Rating	Weighted Ratings
Taiwan	40%	2.0	0.80
Singapore	40%	1.0	0.40
U.S.	15%	1.0	0.15
England	5%	1.0	0.05
			1.40

Moderate Concentration Risk

Low Political/ Economic Risk

11/17

FIG. 9

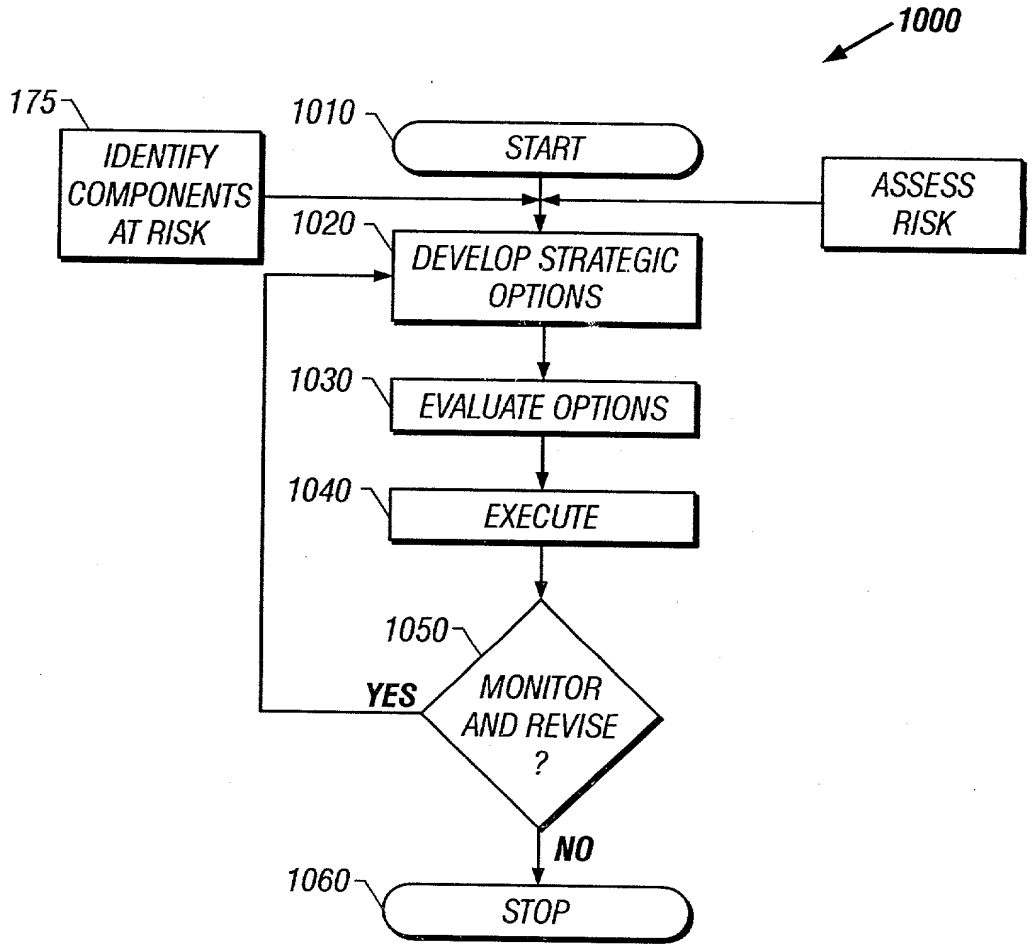
1000
175
IDENTIFY COMPONENTS AT RISK
1010
START
ASSESS RISK
1020
DEVELOP STRATEGIC OPTIONS
1030
EVALUATE OPTIONS
1040
EXECUTE
1050
MONITOR AND REVISE ?
YES
NO
1060
STOP

FIG. 10

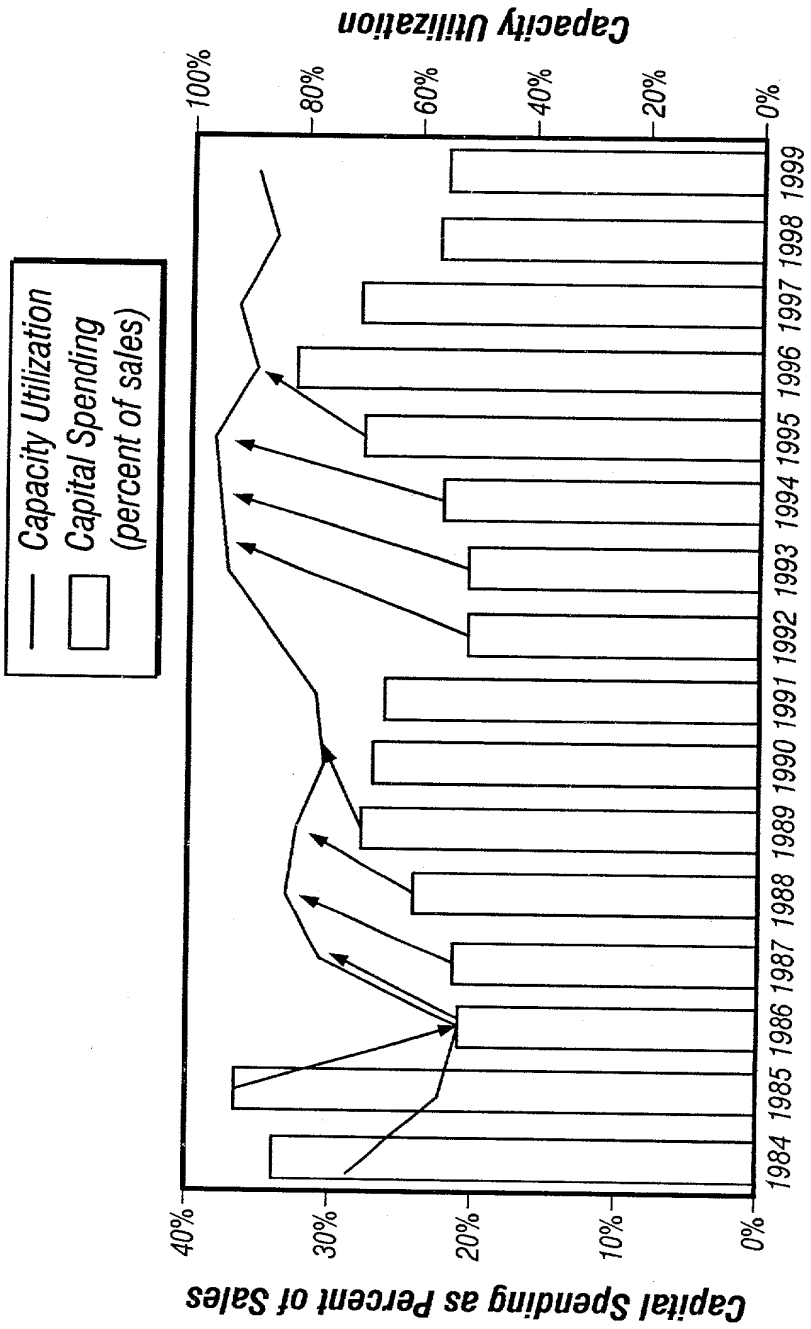
Capacity Utilization
Capital Spending
(percent of sales)
Capital Spending as Percent of Sales
40%
30%
20%
10%
0%
Capacity Utilization
100%
80%
60%
40%
20%
0%
1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999

FIG. 11A

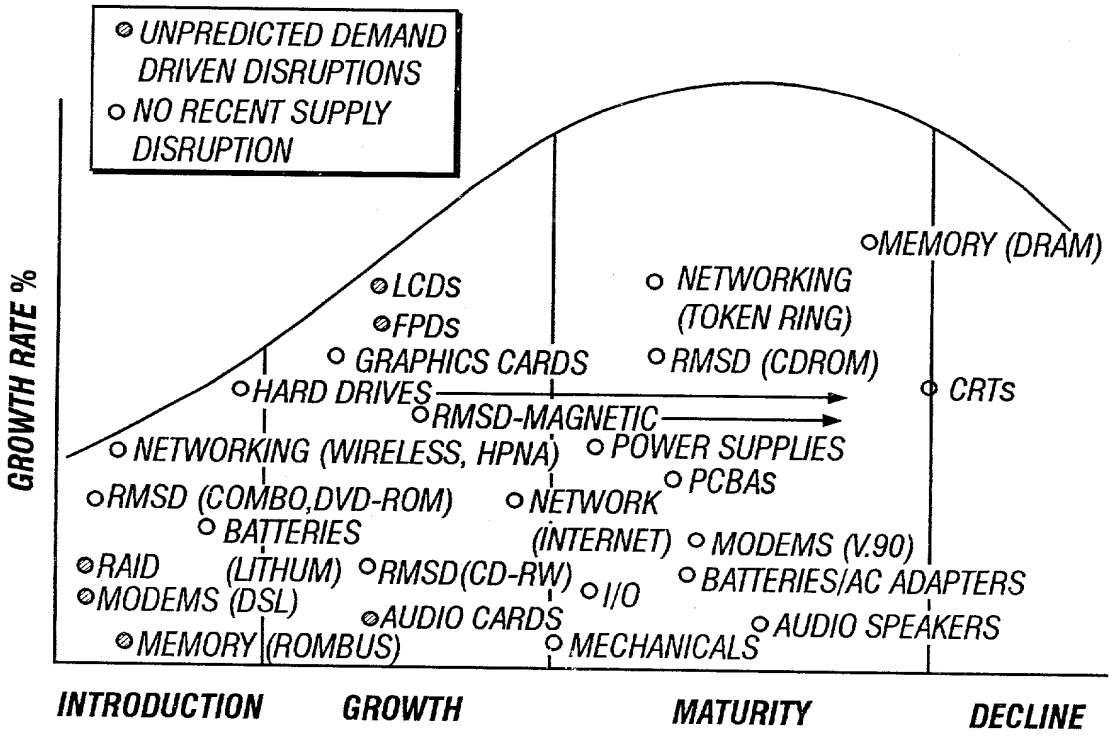
UNPREDICTED DEMAND DRIVEN DISRUPTIONS
NO RECENT SUPPLY DISRUPTION
GROWTH RATE %
MEMORY (DRAM)
LCDs
NETWORKING (TOKEN RING)
FPDs
GRAPHICS CARDS
RMSD (CDROM)
HARD DRIVES
CRTs
RMSD-MAGNETIC
NETWORKING (WIRELESS, HPNA)
POWER SUPPLIES
PCBAs
RMSD (COMBO,DVD-ROM)
NETWORK (INTERNET)
BATTERIES
MODEMS (V.90)
RAID
(LITHUM)
RMSD(CD-RW)
I/O
BATTERIES/AC ADAPTERS
MODEMS (DSL)
AUDIO CARDS
AUDIO SPEAKERS
MEMORY (ROMBUS)
MECHANICALS
INTRODUCTION
GROWTH
MATURITY
DECLINE

FIG. 11B

SUBSTITUTE SHEET (RULE 26)

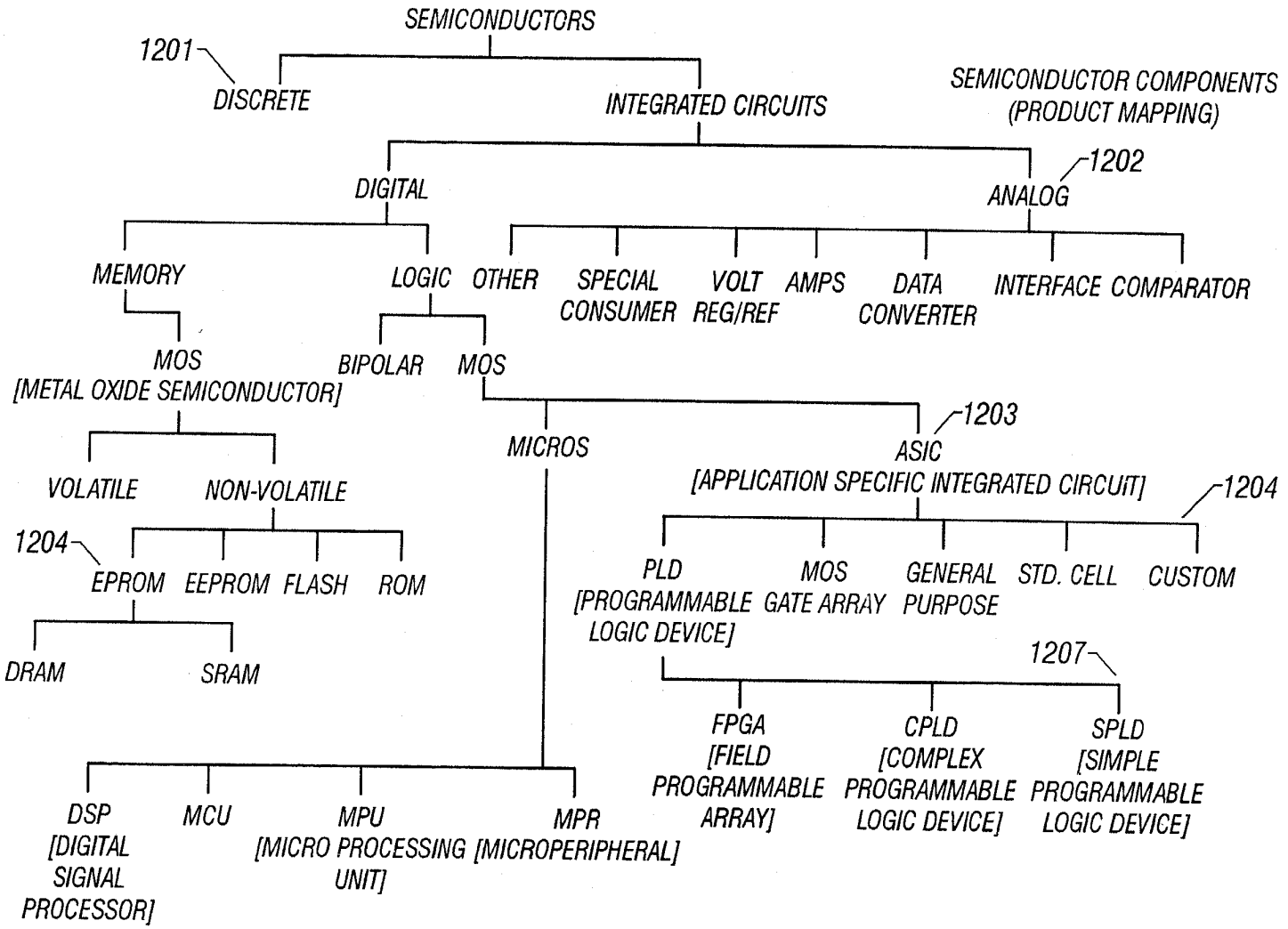

FIG. 12

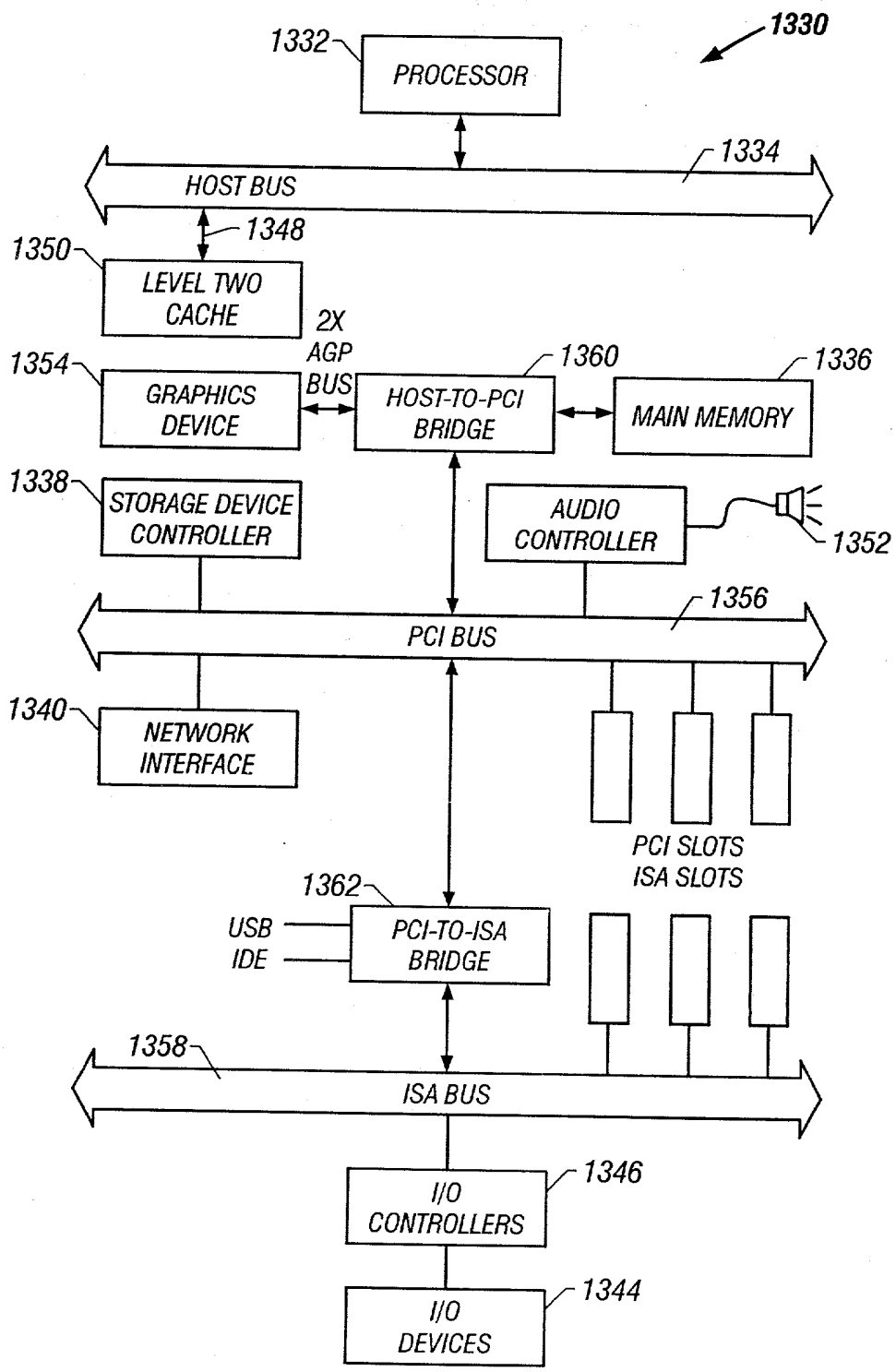
1330
1332
PROCESSOR
1334
HOST BUS
1348
1350
LEVEL TWO CACHE
2X AGP BUS
1354
GRAPHICS DEVICE
1360
HOST-TO-PCI BRIDGE
1336
MAIN MEMORY
1338
STORAGE DEVICE CONTROLLER
AUDIO CONTROLLER
1352
1356
PCI BUS
1340
NETWORK INTERFACE
PCI SLOTS
ISA SLOTS
1362
USB
IDE
PCI-TO-ISA BRIDGE
1358
ISA BUS
1346
I/O CONTROLLERS
1344
I/O DEVICES

FIG. 13

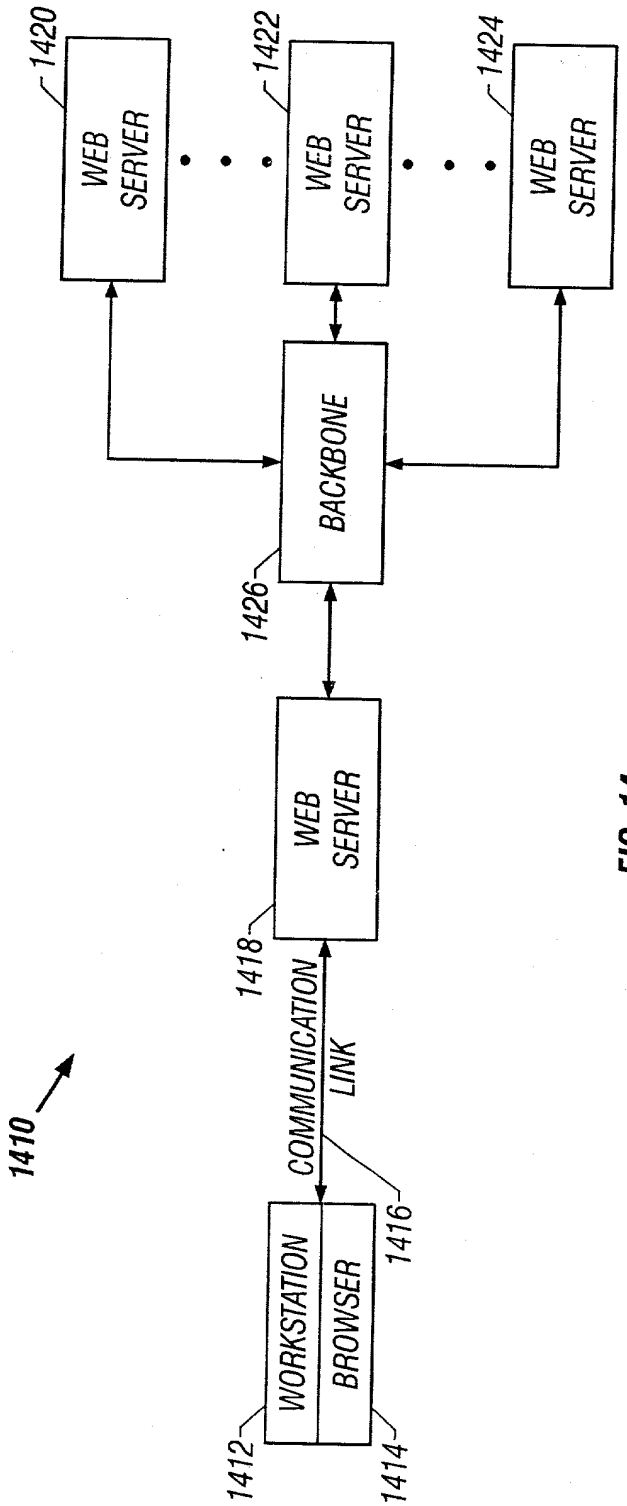
1420
WEB SERVER
1422
WEB SERVER
1424
WEB SERVER
BACKBONE
1426
WEB SERVER
1418
COMMUNICATION LINK
1410
WORKSTATION
BROWSER
1412
1414
1416

FIG. 14